

REMARKS

Summary

This Amendment is responsive to the final Office Action mailed on June 17, 2002. Claims 16-24 have been cancelled, and new claims 25-33 have been added. The new claims are believed to define over the prior art, and particularly the references cited by the examiner in the final Office Action.

In particular, various of the prior claims were rejected based on Pidgeon (US 5,850,305) or the article by Ju, et al. entitled "Method for Eliminating Narrowband Shortwave Interference in Upstream Channel of HFC", Electronic Letters, April 30, 1998, Vol. 34, No. 9, Pages 852-854 (Hereinafter "Ju").

On August 20, 2002, Applicants' undersigned attorney had a telephone interview with the examiner in which the prior art was discussed. Applicants' attorney wishes to thank the examiner for taking the time to discuss this case. It is believed that the new claims presented herein distinguish over the examiner's interpretation of the prior art references, and particularly the Pidgeon reference.

Discussion of Pidgeon

Pidgeon discloses adaptive predistortion control circuitry for use in a communication system. During the telephone interview, the examiner took the position that the system disclosed by Pidgeon would inherently accentuate the signal magnitude at a fixed frequency where nonlinear

distortion resides. Although Applicants disagree with the examiner's reading of Pidgeon, the new claims presented herein more specifically define over the Pidgeon reference.

In particular, each of Applicants' independent claims now requires the signal being communicated to be filtered at the transmitter to accentuate the signal magnitude at a *predetermined fixed frequency where nonlinear distortion is expected to occur, without substantially affecting the signal magnitude at frequencies where said nonlinear distortion is not expected to occur.* This language clearly distinguishes over the examiner's interpretation of Pidgeon, since if Pidgeon inherently accentuates signal magnitude, it does so across the entire signal bandwidth (or at least across a broad portion thereof), including frequencies where distortion is not expected to occur. Such a result would not anticipate or render obvious Applicants' claims, in which the signal magnitude is only accentuated at a predetermined fixed frequency (or a plurality of such frequencies) *without substantially affecting the signal magnitude at frequencies where the nonlinear distortion is not expected to occur.* There is simply no disclosure or even remote suggestion of such a scheme in Pidgeon.

Moreover, Pidgeon makes no disclosure or mention of figuring out frequencies where nonlinear distortion is expected to occur. Nor, does Pidgeon make any attempt to accentuate a transmitted signal magnitude at such frequencies at the transmitter, and to attenuate the signal magnitude at such frequencies at a receiver. Applicants

respectfully submit that such a scheme, as they claim, would be counterintuitive. Prior to the present invention, one skilled in the art would have thought to attenuate signals at frequencies where distortion would be expected to occur; not to accentuate signals at such frequencies.

Accordingly, it is respectfully submitted that the present claims clearly distinguish over the Pidgeon reference taken alone or in combination with the other prior art of record.

Discussion of Ju

Ju discloses a method for eliminating narrowband shortwave interference in an upstream channel of a hybrid fibre-coax (HFC) network, using a finite impulse response digital filter (FIRDF).

Ju does not disclose or remotely suggest Applicants' system for filtering distortion which is expected to occur at one or more fixed frequencies as set forth in the present claims. Accordingly, Ju does not render the present claims unpatentable.

Further remarks regarding the asserted relationship between Applicants' claims and the prior art are not deemed necessary, in view of the new claims and the foregoing discussion. Applicants' silence as to any of the Examiner's comments is not indicative of an acquiescence to the stated grounds of rejection.

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Withdrawal of the rejections under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a) is therefore respectfully requested.

Conclusion

In view of the foregoing, the Examiner is respectfully requested to reconsider this application, allow each of the presently pending claims, and to pass the application on to an early issue. If there are any remaining issues that need to be addressed in order to place this application into condition for allowance, the Examiner is requested to telephone Applicants' undersigned attorney.

Respectfully submitted,



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